

## Contents of *Aquaculture*, Volume 182

VOL. 182 NOS. 1, 2

1 FEBRUARY 2000

### Diseases, Parasites and Predators

- The microflora of rainbow trout intestine: a comparison of traditional and molecular identification  
B. Spanggaard (Lyngby, Denmark), I. Huber (Hørsholm, Denmark), J. Nielsen (Lyngby, Denmark),  
T. Nielsen (Brande, Denmark), K.F. Appel (Hørsholm, Denmark) and L. Gram (Lyngby, Denmark). 1
- Effects of three preservation methods on the evolution of swimbladder radiographic appearance in sea  
bass and sea bream juveniles  
G. Koumoundouros, P. Divanach, A. Savaki and M. Kentouri (Iraklion, Greece) . . . . . 17
- The lethality of anti-sea lice formulations Salmosan® (Azamethiphos) and Excis® (Cypermethrin) to  
stage IV and adult lobsters (*Homarus americanus*) during repeated short-term exposures  
L.E. Burrige, K. Haya, S.L. Waddy and J. Wade (St. Andrews, New Brunswick, Canada) . . . . . 27
- The lethality of the cypermethrin formulation Excis® to larval and post-larval stages of the American  
lobster (*Homarus americanus*)  
L.E. Burrige, K. Haya, F.H. Page, S.L. Waddy, V. Zitko and J. Wade (St. Andrews, New  
Brunswick, Canada) . . . . . 37
- Pharmacokinetics of enrofloxacin in the seabass (*Dicentrarchus labrax*)  
L. Intorre (Pisa, Italy), S. Cecchini (Potenza, Italy), S. Bertini, A.M. Cognetti Varriale,  
G. Soldani and G. Mengozzi (Pisa, Italy) . . . . . 49

### Genetics and Breeding

- Sperm traits and fertilization success of male and sex-reversed female rainbow trout (*Oncorhynchus  
mykiss*)  
A.J. Geffen and J.P. Evans (British Isles, UK) . . . . . 61
- Parentage and relatedness determination in farmed Atlantic salmon (*Salmo salar*) using microsatellite  
markers  
A.T. Norris, D.G. Bradley and E.P. Cunningham (Dublin, Ireland) . . . . . 73

### Husbandry and Management

- Tank wall colour and light level affect growth and survival of Eurasian perch larvae (*Perca fluviatilis  
L.*)  
L. Tamazouzt (Nancy, France), B. Chatain (Palavas-les-Flots, France) and P. Fontaine (Nancy,  
France) . . . . . 85
- Identification of factors affecting growth and survival of the tropical scallop *Euvola (Pecten) ziczac* in  
the Golfo de Cariaco, Venezuela  
C.J.M. Lodeiros (Cumaná, Venezuela; Laval, Que., Canada) and J.H. Himmelman (Laval, Que.,  
Canada). . . . . 91
- Experimental field tests of natural algal diets on gonad index and quality in the green sea urchin,  
*Strongylocentrotus droebachiensis*: a case for rapid summer production in post-spawned animals  
R.L. Vadas Sr. (Orono, ME, USA), B. Beal (Machias, ME, USA), T. Dowling (Orono, ME,  
Tenants Harbor, ME, USA) and J.C. Fegley (Orono, ME, USA). . . . . 115

|  |                         |
|--|-------------------------|
| An automated system for egg collection, hatching, and transfer of larvae in a freshwater finfish hatchery<br>F.-G. Liu (Taipei, Keelung, Taiwan), T.-S. Lin, D.-U. Huang, M.-L. Perng (Chupei, Taiwan) and I. Chiu Liao (Keelung, Taiwan) . . . . .  | 137                     |
| Cannibalism in Japanese flounder juveniles, <i>Paralichthys olivaceus</i> , reared under controlled conditions<br>S. Dou (Tokyo, Japan), T. Seikai (Kyoto, Japan) and K. Tsukamoto (Tokyo, Japan) . . . . .  | 149                     |
| Influence of water volume, surface area, and water replacement rate on weight gain of juvenile freshwater prawns, <i>Macrobrachium rosenbergii</i><br>L.R. D'Abramo, W.H. Daniels, P.D. Gerard, W.H. Jun and C.G. Summerlin (Mississippi State, MS, USA) . . . . .   | 161                     |
| Management of Manila clam beds. I. Influence of seed size, type of substratum and protection on initial mortality<br>J. Cigarria (Principau D'Asturies, Spain) and J.M. Fernández (Asturias, Spain) . . . . .  | 173                     |
| <b>Nutrition</b>   |                         |
| Inclusion of an extruded dehulled pea seed meal in diets for juvenile European sea bass ( <i>Dicentrarchus labrax</i> )<br>A. Gouveia (Porto, Portugal) and S.J. Davies (Plymouth, UK) . . . . .   | 183                     |
| <b>Announcement</b> . . . . .  | 195                     |
| <b>VOL. 182 NOS. 3, 4</b>  | <b>15 FEBRUARY 2000</b> |
| <b>Diseases, Parasites and Predators</b>   |                         |
| Elimination of the gill worm <i>Urastoma cyprinae</i> (Graff) from the eastern oyster <i>Crassostrea virginica</i> (Gmelin) using different salinity-temperature combinations<br>E. Bataller and A.D. Boghen (Moncton, New Brunswick, Canada) . . . . .  | 199                     |
| High sensitivity of skin cathepsins L and B of European eel ( <i>Anguilla anguilla</i> ) to thermal stress<br>F. Aranishi (Yokohama, Japan) . . . . .  | 209                     |
| <b>Economics and Marketing</b>   |                         |
| An empirical Bayes procedure for adaptive forecasting of shrimp yield<br>D.G. Whiting, H.D. Tolley and G.W. Fellingham (Provo, UT, USA) . . . . .  | 215                     |
| <b>Husbandry and Management</b>  |                         |
| Concentration of 22,23-dihydroavermectin B <sub>1a</sub> detected in the sediments at an Atlantic salmon farm using orally administered ivermectin to control sea-lice infestation<br>A. Cannavan (Northern Ireland, Ireland), R. Coyne (Galway, Ireland), D.G. Kennedy (Northern Ireland, Ireland) and P. Smith (Galway, Ireland) . . . . . | 229                     |
| Bacterial additives that consistently enhance rotifer growth under synxenic culture conditions. 2. Use of single and multiple bacterial probiotics<br>P.A. Douillet (Port Aransas, TX, USA) . . . . .  | 241                     |
| Bacterial additives that consistently enhance rotifer growth under synxenic culture conditions. 1. Evaluation of commercial products and pure isolates<br>P.A. Douillet (Port Aransas, TX, USA) . . . . .  | 249                     |
| Muscle activity at slaughter: I. Changes in flesh colour and gaping in rainbow trout<br>D.H.F. Robb, S.C. Kestin and P.D. Warriss (Bristol, UK) . . . . .  | 261                     |
| <b>Nutrition</b>   |                         |
| Dietary manipulations affecting growth and nitrogenous waste production of red drum, <i>Sciaenops ocellatus</i> . II. Effects of energy level and nutrient density at various feeding rates<br>B.B. McGoogan and D.M. Gatlin III (College Station, TX, USA) . . . . .  | 271                     |
| Effects of grinding, steam conditioning and extrusion of a practical diet on digestibility and weight gain of silver perch, <i>Bidyanus bidyanus</i><br>M.A. Booth, G.L. Allan and R. Warner-Smith (Salamander Bay, NSW, Australia) . . . . .  | 287                     |

|   |     |
|---|-----|
| The nutritional value of algae grown under different culture conditions for <i>Mytilus edulis</i> L. larvae<br>N. Leonardos and I.A.N. Lucas (North Wales, UK) . . . . .  | 301 |
| Distribution of intestinal enzyme activities along the intestinal tract of cultured Nile tilapia, <i>Oreochromis niloticus</i> L.<br>B. Tengjaroenkul, B.J. Smith, T. Caceci and S.A. Smith (Blacksburg, VA, USA). . . . .  | 317 |
| The influence of nocturnal vs. diurnal feeding under winter conditions on growth and feed conversion of European sea bass ( <i>Dicentrarchus labrax</i> , L.)<br>M. Azzaydi, F.J. Martínez, S. Zamora, F.J. Sánchez-Vázquez and J.A. Madrid (Murcia, Spain) . . . | 329 |
| Effects of water temperature and dissolved oxygen on daily feed consumption, feed utilization and growth of channel catfish ( <i>Ictalurus punctatus</i> )<br>J.A. Buentello, D.M. Gatlin III and W.H. Neill (College Station, TX, USA) . . . . .                 | 339 |
| The influence of dietary protein and fat levels on tissue free amino acid levels of fingerling rainbow trout ( <i>Oncorhynchus mykiss</i> )<br>T. Yamamoto (Tamaki, Mie, Japan), T. Unuma (Nansei, Mie, Japan) and T. Akiyama (Kanagawa, Japan). . . . .          | 353 |
| <b>Physiology and Endocrinology</b>   |     |
| Ovarian maturation and spawning in the white shrimp, <i>Penaeus vannamei</i> , by serotonin injection<br>A.A. Vaca and J. Alfaro (Heredia, Costa Rica) . . . . .  | 373 |
| Salinity and light effects on growth, photosynthesis, and respiration of <i>Grateloupia filicina</i> (Rhodophyta)<br>S.-L. Wong (Keelung, Pingtung, Taiwan) and J. Chang (Keelung, Taiwan) . . . . .  | 387 |
| <b>Book Review</b>  |     |
| Anaesthetic and Sedative Techniques for Aquatic Animals<br>M. Jobling (Tromsø, Norway) . . . . .  | 397 |
| <b>Contents of Aquaculture, Volume 182</b> . . . . .  | 399 |

